Introduction to Japanese Anime Industry

This is a compilation of secondary sources that I know of and also from primary sources. It is something for people who get contacted by scouters/recruiters from Japanese studios via twitter and for many reasons there are things you need to know first and how to communicate with your producer, otherwise you will lose a lot of hair! If you have NEVER worked in the industry or if you do not know how the animation industry works in general and if you are aiming to be a working freelance animator for Japanese anime, then this guide is for you.

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First thing that recruiters will try to do by contacting you is to know if you are interested, then they will proceed to ask if you some questions depending on the studio, they might ask you if you can do this or that. Then that's when they will simply send a lot of materials to you without telling you how to do it. Materials includes storyboard, character sheet, etc. If some are missing you need to request ASAP. Recruiters will no longer contact you or ignore you if they feel you are not experienced enough to do the job[1]. Unless a project is in the middle of a season, they usually have no problem dealing with newcomers, but that's not why you chose to become a freelancer. A freelancer needs to know everything about the job because you never know what they need so it's good to be rounded in a bit of everything, which means that you need to know everything already beforehand otherwise that's a good-bye from the studios who are contacting you[2].

[1] That goes along with any job, if a studio is in the middle of a production, very often they will lack people to work with and so they rely on freelancers. If they like what you have they will contact you. However, if you are inexperienced then it is normal for them to no longer contact you, please do not feel like it is a personal thing but studios who are very busy cannot train you personally in the middle of a season.

[2]Also, unlike in-house studios, freelancers who get contacted are not kept in a file for future references/projects, so it is very important to be contacted first and then to follow up on that job, because you might not get a second chance!

So right away, when they contact you, they usually write in broken English, but you need to make sure that you understand clearly what your job is. Communication is very important; however, my guess is that you do not speak Japanese. It is simple to solve that. Whenever you are replying, write two different version of the same sentence; one in English and one in Japanese. Your bad, broken Japanese is better than having a miscommunication, plus it shows that you are serious. What I have below is two images that shows the whole 2D workforce that applies in the anime industry. All you have to do is to reply to your producer and ask him/her to circle or to point the tasks that you are assigned. Simple.

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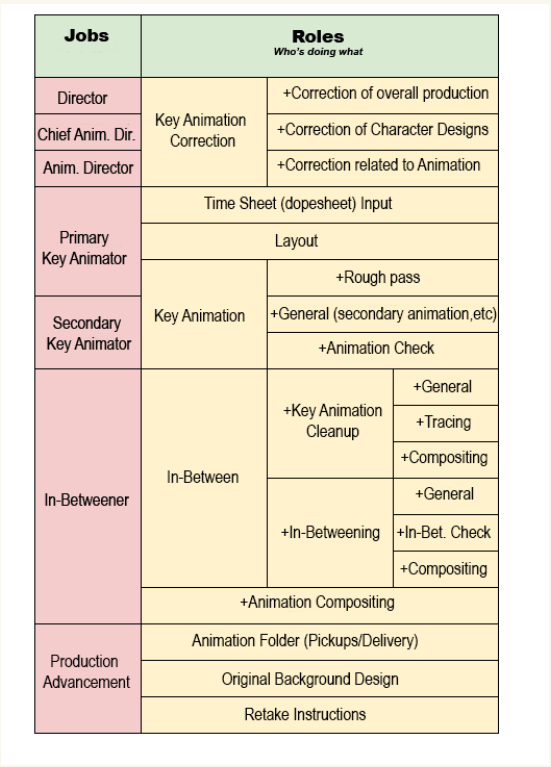
制作担当	制作物		
演出	修正原画	演出修正	
総作画監督		総作画監督修正	
作画監督		作画監督修正	
第一原画	タイムシート		
	レイアウト		
第二原画	原画	ラフ	
		通常	
		参考	
動画	動画	原画トレス	通常
			同トレス
			合成用
		中割り	通常
			参考
			合成用
	合成伝票		
制作進行	カット袋		
	背景原図		
	リテーク指示票		



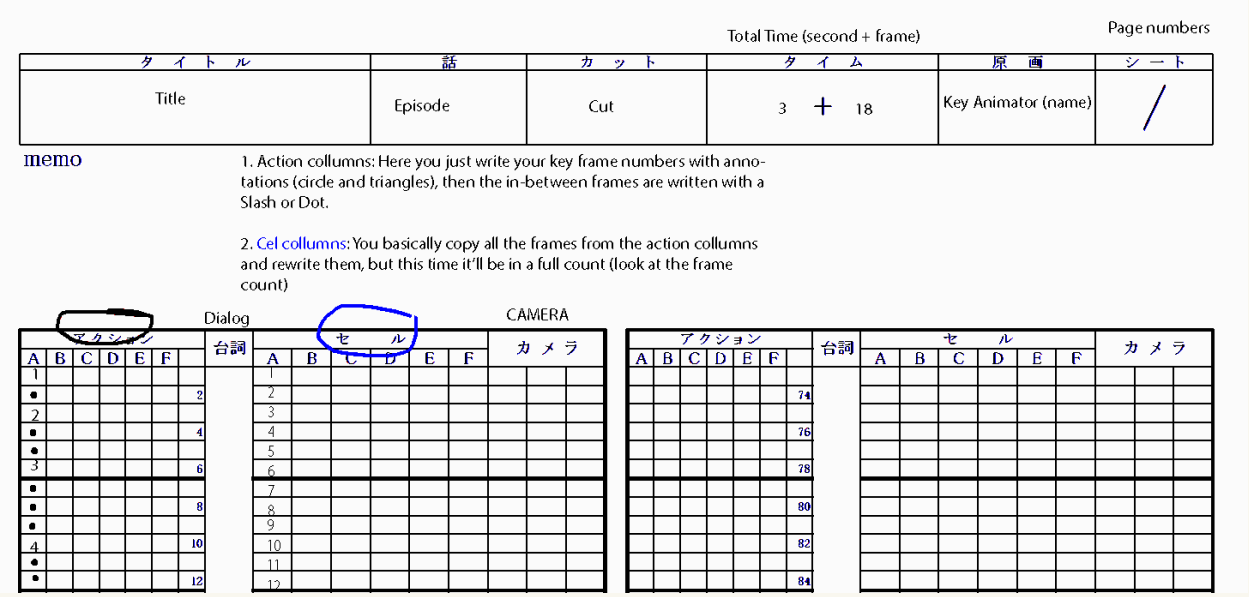
Jobs	Roles *Who's doing what*		
Director	Key Animation Correction	+Correction of overall production	
Chief Anim. Dir.		+Correction of Character Designs	
Anim. Director		+Correction related to Animation	
Primary Key Animator	Time Sheet (dopesheet) Input		
	Layout		
Secondary Key Animator	Key Animation	+Rough pass	
		+General (secondary animation,etc)	
		+Animation Check	
In-Betweener	In-Between	+Key Animation Cleanup	+General
			+Tracing
			+Compositing
		+In-Betweening	+General
			+In-Bet. Check
			+Compositing
	+Animation Compositing		
Production Advancement	Animation Folder (Pickups/Delivery)		
	Original Background Design		
	Retake Instructions		

So that solves the initial impression issue that could potentially ruin your opportunity to get a job.

Now, the next thing you need to know is how your job works. What I will cover is mostly about KA (key animation), because freelance animators are not hired for cleaning/in-betweening (in Japanese studios).

X-SHEET

That's the first thing you need to understand in order to work as an animator, but from my experience a lot of people ignore this from the beginning so later on this process slows people down and affects their workflow. **IMPORTANT:** Please note to be specific with the x-sheet as which frame starts and where it ends, same with the memo and the camera instructions; you have to be extra careful because everything needs to be exact!



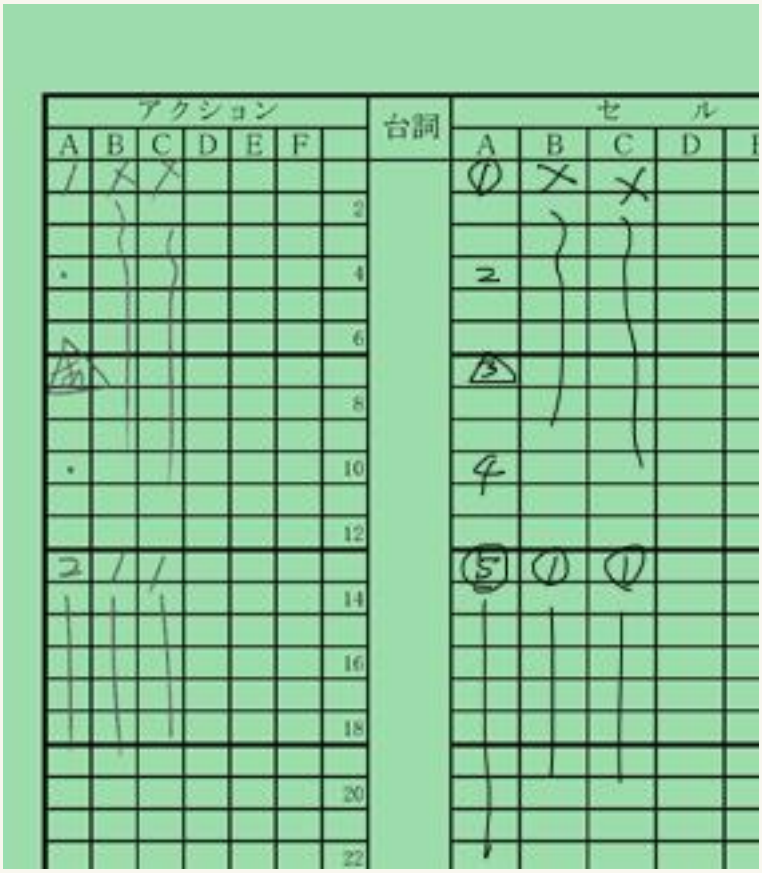
the "Action[3]" column is where you as a KA needs to fill. The only difference between Western and Japanese number labeling is how you input them as shown below:

- American/Western Timesheet: 1,3,6,8 (based on the exposure times counts, in here it's all on 2s)
- Japanese: 1,2,3,4,(based on key counts like in the picture above)

The "セル" column or "cel" is where they will fill actual frame counts (keys + in-between) after you have handed your cut.

[3] Always remember to **CIRCLE** the keys otherwise it's considered as an in-between (above is not a good example). **In-between frames** that needs to be filled are on the "action" column but it's a standard to simply leave a dot or slash to fill the box. **TRIANGLE** is for breakdowns, whatever you are animating, it is always good to add breakdowns to give more movements in the rough key animation (if you are animating in America or Europe, you would see a huge number of breakdowns done by the KA). It also makes the in-betweener's job easier.

So, let’s take an example for the X-sheet/Timesheet

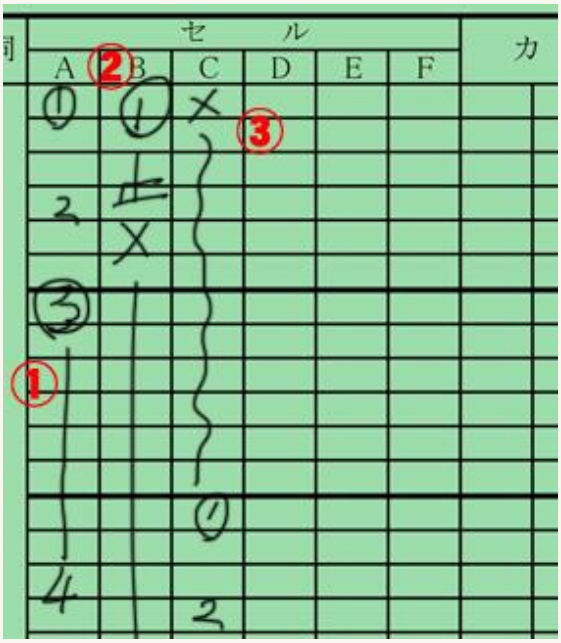


In here, the Keys are not actually circled, just beware of that, but notice the “あ” kanji in triangle, some Japanese animators likes to create breakdowns using hiragana or katakana, some others like to use them for sub-layers (I will get into that later). If you do use hiragana for breakdowns, make sure that they are ordered properly (a,i,u,e,o)

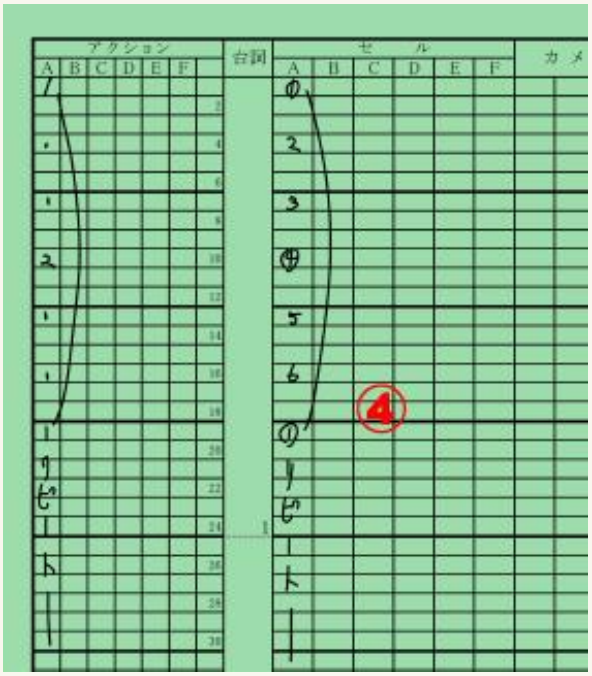
In the first Key, it is written as “1”, then followed by “あ” and then “2” followed by a long dash.

That dash is simply a way to express how long that frame is going to be. Some frames sometimes stay still for half a second, so that’s when you would want to use it. Unless it is followed by another key number below, if it is the last key frame for that column you have to always add an “X” at the frame that you want to stop. Just like the B and C column, the X appears first, followed by a dash is because there is nothing before the first key at frame 13 (image above).

If, however, you have a frame that started and stopped and if you no longer want that frame to appear again, you add an “x” at the end, but if you need to have a single still frame that overextends, sustaining its duration then add “止メ” (like in B column), like this:



If you have a loop happening, just add an arc between the starting point and the end point just like here:



And at the end, if the loop is still persisting just write “リピート” which means “repeat” followed by a dash until it stops and ends with an “x”. There are other stuffs that could be useful such as camera directions and writing in the dialogue column but those things are pretty intuitive and the same process as American timesheets.

Layout and Animation

Camera

First and foremost, there are two ways to do camera guides as a KA that needs to get translated into the X-sheet as instruction.

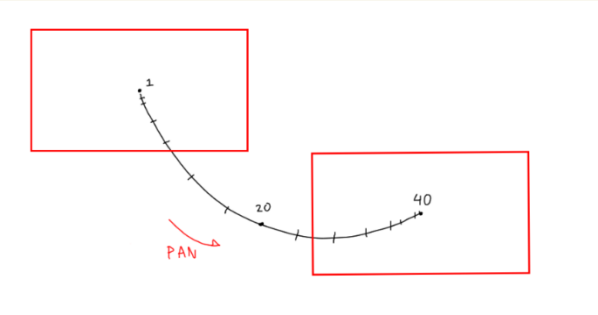


Figure 1

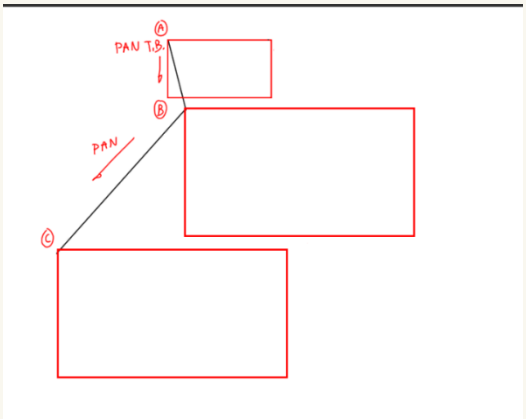


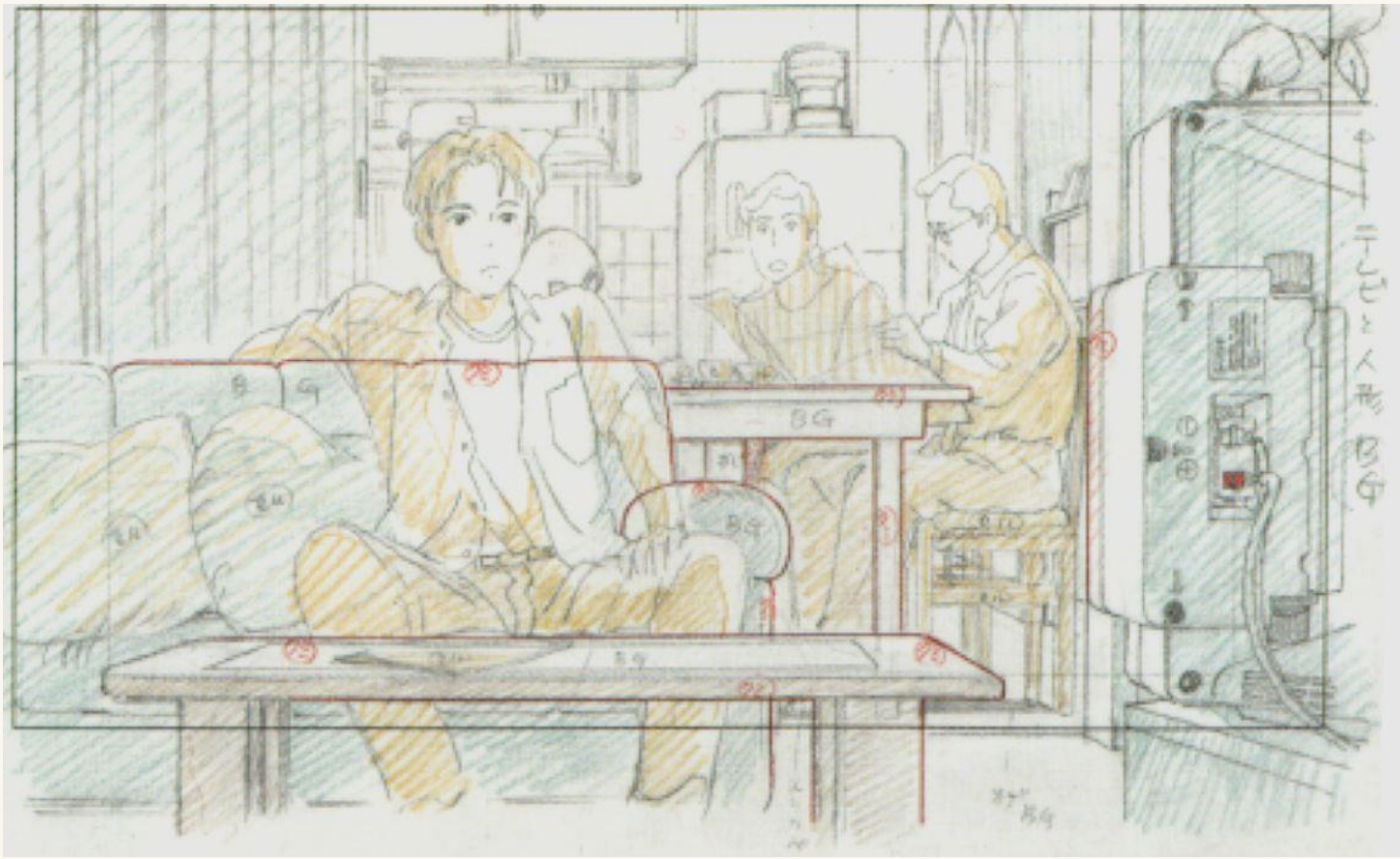
Figure 2

As you can see, there are two different types of way to create a camera guide. What you need to notice here is the **arrows/lines** accompanied with numbers or letters. In **Figure 1**, we see a camera movement with a timing chart line that pans from frame 1 to frame 40, so if you have a camera motion that curves into a complex/smooth path, you would have to add notches as part of your timing and translate every single frame into the x-sheet (under the camera column). In Figure 1, each these notches become individual frames that you will need to write onto the x-sheet.

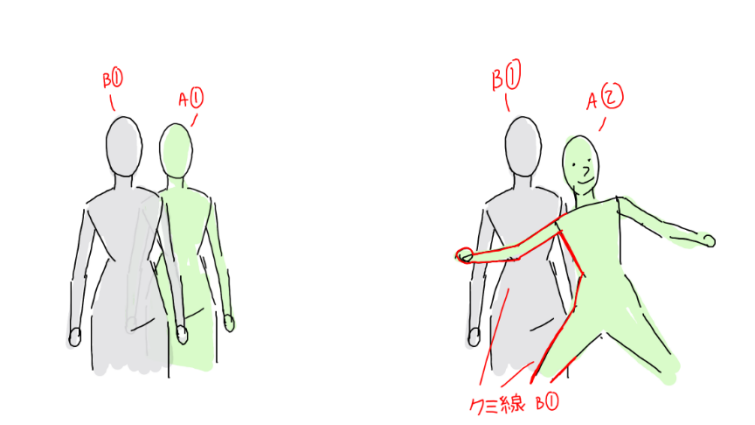
As for **Figure 2**, there are camera pans that are more direct and only require you to add letters to indicate where they start. On the x-sheet, you add those letters as your keys. You do not need to include timing chart because in figure 2, those are simple camera movements (assuming they are all moving at constant speed).

Kumisen (クミ線)

The Kumisen is an outline that helps distinguish layers that are on top of each other (animation layer and BG/BOOK layers) without having the need to create extra layers. To put it in perspective, imagine you have the animation layer of 3 characters placed within different part of the background (on a sofa, on a chair, behind a table, etc) but you do not want to create extra layers for those characters, so what do you do? **You simply animate them within the confinement of those red lines outlining the intersecting space where anything behind those lines are simply not drawn.** As shown below:



As you can see above, every single red line is used to outline the BOOK/BG layers that would intersect with the animation layer. In this shot, the BG is a single layer despite having multiple characters, because the layout specifies exactly where the animation layer should stop. The character in the foreground sitting towards the camera, for example, his legs are clearly behind the mini-table. **In the animation layer, you would probably draw the whole leg, but to indicate that it is behind the Kumisen, then add the same red lines as the one shown above.** Here's another example, simplified:

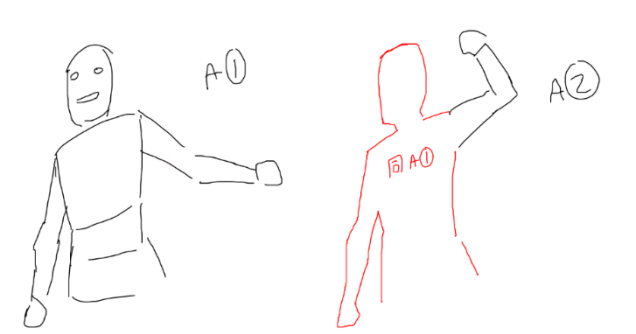


1st KA/2ND KA

The layout process for anime is very similar to any other layout job in the animation industry, but it is not a solo job in the anime industry. Japanese KA also have to do their own layout and it is separated into two categories that are called **1st and 2nd key animators** or 第一原画/第二原画 (dai-ichi-genga/dai-ni-genga) they are also commonly known as 一原/二原 (ichihara/nihara).

Now this can be very confusing for animators because you have to understand the way the workforce is split (just look up to the first image above this pdf). Now I will explain it. **The 1st key animator's job** is:

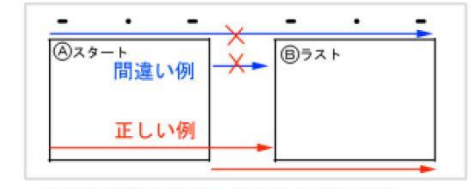
1. Interpret the shot composition based on the storyboard (does not have to be 100 accurate but it needs to represent the same shot as the storyboard)
2. To create notes for the camera (based on the storyboard) and to translate that onto the timesheet (such as Fade-In/Fade-Out). Since you do not speak/write in Japanese, if you want to give some specific instructions to the camera department (post-production) then make sure you are writing clearly (whether it's in English or Japanese or both).
3. Rough animation is added in this stage, no details are needed however if we see the character's face you should at least add some details to the feature of the character (eyes/nose, hint of hair). But it is rough in general, your supervisor just need to check on the movement and see the intention of the character animation, that's all.
    a. You can minor elements such as line colors (called 色 TP or trace-point), camera movements, camera blur FX, glows, etc.
    b. If there are parts that are not moving during the animation, without separating them into different layers, label them as 同 (same) before the key number. Those frames represent the same preceding frame drawing as shown below (make sure its also outlined properly).



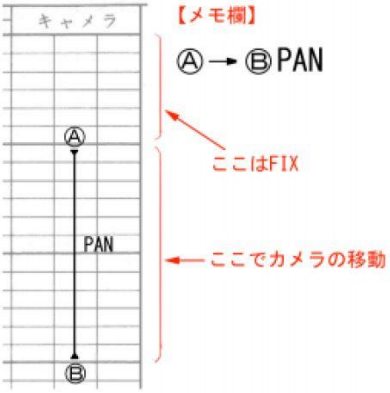
Now for the **2nd Key animator's job**:

1. Finish the animation that was sent by your supervisor. If you were the Ichihara then you automatically become the Nihara, the 2nd Key animator. Sometimes it is sent to someone else sometimes it is not, very situational.
2. If you become the 2nd Key animator, you need to fix all the mistakes that were present in the 1st KA. Fixes that includes all aspects regarding to the animation. In this stage, your animation needs to be more polished in terms of details, that includes secondary actions that did not appear during the first stage of the process, you'll have to add them yourself (hair, clothes, shoes, debris, smoke, etc). Although most effects are animated by people specializing in that, you do not have to add them yourself.
3. Pray that you did a good job.

- **Writing instructions**
  - As the person in charge of the layout, you need to write instruction both on the layout drawing and the timesheets. Now what differs from these two is the departments that will look at them. The animation department and the camera department will look at both your timesheet and animation for various instructions. It is better to write your specific camera instruction such as a zoom or pan on the x-sheet and the specific animation instructions on the layout, to keep them organized like that. For more details on those camera instructions, it will be covered in the next section.
- **Shot composition**
  - Make sure when you start off to check if there is any camera movement, your job is NOT to add actual movements in the camera but instead you need to give them instructions. In the story, the director might have written "PAN left", but who knows how fast that panning is! Only you do! So how do you instruct speed for camera movements? First, set up your canvas so that it can pan from the original director to the end point (it is better to make the project resolution a bit bigger than needed just in case). After you've set it up, make sure to write at the bottom left corner "100fr" which means that your original



★矢印は角から角へと引くようにする
（方向だけでなく移動量の情報も大事）

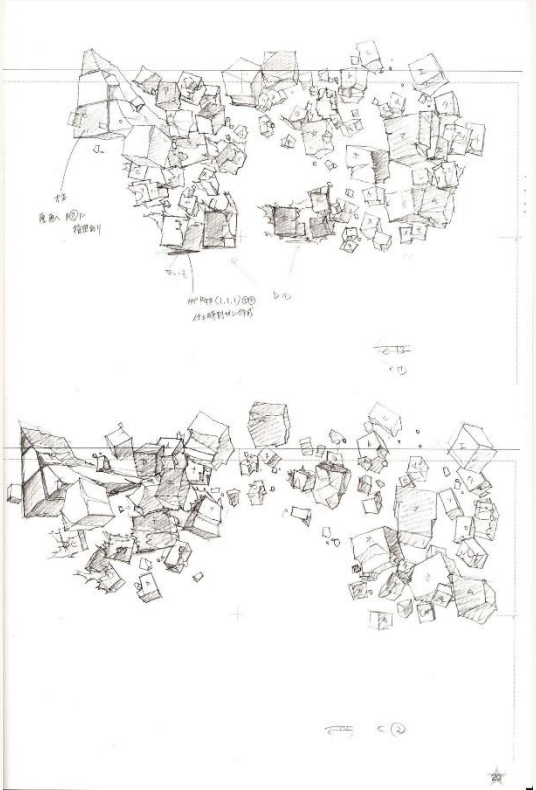


resolution is at 100% (if you are zooming in, then the starting point A should be at 100fr and B at 60fr, something like that). Under here, you see the person who is supposed to be panning the shot has to mention that the layout will be moving from left to right. MAKE SURE that wherever you are pointing your arrows, it has to start and end at the same position such as this image under (in red). Then you can mention it in the timesheet from what frame it is going to start panning. If your frame sits still for 5 frames, then just write beside the frames in brackets "FIX" as in fixed position.

- **Millimeters per frames, ミリ/K or mm/K**. In the composition layout, you can write the same thing as the director "PAN left" followed by how fast you want that pan to be. Just look at your timesheet and estimate how fast/slow the camera should move from point A to B (if don't want to bother with this, just make a timing arc inside the arrows like you would if you were animating).
  - **Example**: *Pan left 20mm/K*

■ **Laying out all the different layers separated into two categories**

- Background layers:
  - **BG, BOOK** 1, 2, 3, 4, etc. (BG will be the first layer in the entire shot, so it is usually the sky or something like that, BOOKs is basically a background element that could be a tree or house, followed by a number)
- Animation layers
  - The **main layers** will be numbered as A, B, C, D, E, F, G (from the lowest/first layer to the last/top)
  - The **sub-layers** are numbered exactly as the main layers except it has a symbol above the letters: A', B', C', D'. What these sub-layers represent are layers that respectively belongs to the letter. If my main layer is A, and if the animator decided to add layers on top of that (such as hair, accessories, etc.) then it will be noted as A'. If it has even more sub-layers belonging to the same letter then you add A''. The sub-layers are something that you shouldn't worry too much because chances are people work on digital nowadays, but it's good to know how traditional animation used to work with layers.



- **Labels**: these are conditional labels (as shown on the right) that will not be accounted in the timesheet, but just a **visual aid to keep multiple details in track for in-betweening**. For example, Nakamura's cubes will be shown on the layout as different hiragana and katakana symbols so it is easier to animate. More details in the next section.
    - Katana labels such as these [ア イ ウ エ オ] are used to keep track of different non-layered drawings.

Color tracing

- This is an optional thing for you to do, but usually you leave this to in-betweener/cleaners, but I will briefly explain how this works. In essence once an animation is finished, a department will add coloured lines inside the characters, objects or effects to simulate gradation which has two things: highlights and shades. It's similar to a terminator sitting between the core shadow and half-light shades. There are two types of line colour:
    - **Warm Attributes**: These includes anything between Yellow (being the warmest) and Orange. Anything that precedes a blue line will be represent the shade, in relationship to its specular color.
    - **Cold Attributes:** These includes anything between Blue (being the darkest shade) and purple.
    - **Green:** Green is used as a line separation to indicate whether the area is BLACK or WHITE, usually for eyebrows, eyeliners, the
      c

- If you want to fill in the areas then make sure you do it in a way that is clear, as shown below.

Note: *I HIGHLY discourage people who would add colors in their layouts just because they saw on sakugabooru how layouts looked like, but the reason why you need to avoid that is because there is a whole department who is doing the color tracing and as a result anything extra would slow people down and that's the opposite effect that you want to create as a freelancer. The layouts you see on the internet are usually cleaned and went through 3-4 different departments and checkups before it is fully complete. Your layouts can be detailed as much as you want but as long it is consistent according to the cuts given to you and your animation skill.*
Just remember that your layouts will eventually be split into BG and animation and it will be distributed to these two departments and people will have to follow your drawings. Usually, there are people out there that will correct your mistakes without you knowing, however I recommend you to always do your best to make it easier for others.

As for the actual animation fortunately, the only thing you need to keep in mind is **CONSISTENCY** and with the right timing arcs. Timing arcs/charts or **"**ツメ指示**"** are added if you need to give instructions to in-between[4] departments on how to properly delivery the timing of the movement and its arcs (if it exists). When you add arcs, make sure it is not obstructing the view of the drawings.

Japanese Storyboard/Animation Terminologies and Labels for X-Sheets/Layouts

One of the confusion part of working as an animator in Japan is trying to figure out what is happening in the storyboard while it is all in Japanese. Japanese storyboards are very different from storyboards here in North America in terms of quality, but in essence it is similar; it has arrows, camera direction, dialogues and timings (seconds + frames). Depending on the director who is drawing them, they may convey emotions or no emotions at all and sometimes one cannot decipher what is going on at all. Interpreting storyboards is a skill that you need to develop and more often than not, the storyboard can be filled with drawings that are not clear enough. You need first to read everything, then you will be able to understand your cut with a bigger picture in mind.

[4] The notches that you see on the image are in-betweens, except for the first key and the last key extreme.

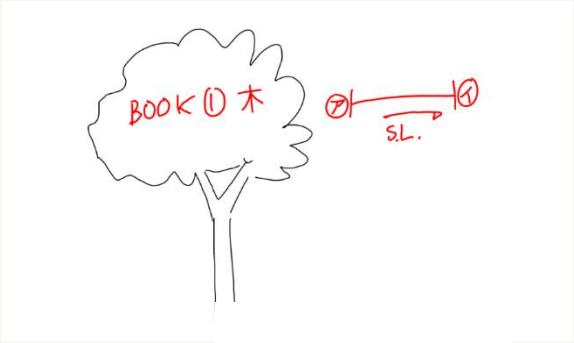
セル

- Translates as “cel” but it means “layer”; [A セル] means Layer A.

Arrows, Follow, PAN

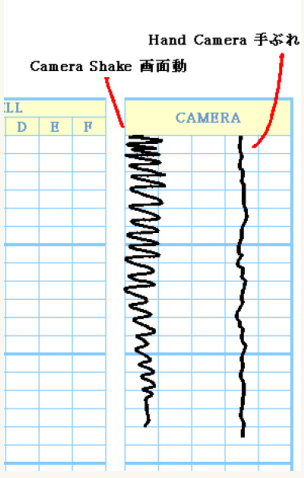
- In storyboarding, the universal language for depicting movements without drawing is depicted by using **directional arrows**. If you see arrows pointing towards a certain direction it means that something is going towards that direction. It could be emphasized further whether or not is the foreground that is moving (characters) or the background (if it is moving then it is usually written BG followed by an arrow). There could be multiple arrows showing on a single shot to depict what is happening.

- **Follow** is simply the camera following the character in a specific direction (which means that the BG is moving on the opposite direction). Directors like to use this to express situations where the characters are moving at incredible speed and that the camera is fixed onto the character’s movement. Animation-wise, this is simple, just a loop for a walk cycle or running cycle, unless you’re doing something fancy where you have to animate the whole background (rip).
- **PAN** means panning, just a normal camera movement towards a certain space in the shot.
- **Slide/SL** -This is used for only the BG layers and BOOKs to create camera effects such as a multiplane or a still tree moving in the back. For those, label them using Hiragana letters so nobody get confused when they have to look at the layers.

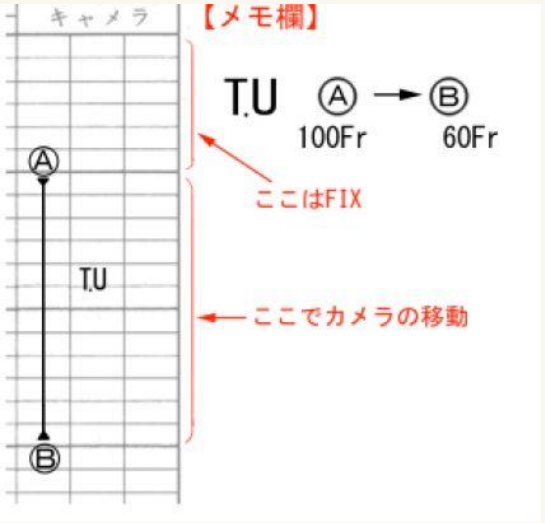


Camera Shake (画面動) , Manual Camera (手ぶれ)

- Camera shake is when there is a high explosion or impact frame as illustrated as this intense scribbling on the right, as opposed to the Hand camera which is a casual, wobbly line. Those lines represent the intensity of the shake and how the overall feel of the camera should be in that section.



T.B/T.U



- TRACK BACK/TRACK UP, derives from live action film. In animation, it simply means to zoom into the image (T.U) or to zoom out (T.B). Visually, the storyboard should have the frame followed by arrows point inward or outward to describe the camera movement. Sometimes, it could be written as QT.B or QT.U, translation as **quick** track back/track in.
    - Quick note: I mentioned it before, but FR means frame, but when it has a number such as 100fr, it means that the resolution frame is at 100%.

コマ/KOMA/Frame

- Koma simply means “frame”, if you see a specific number beside “**K**”, like 2k/3k, it usually means that the frame is on 2s or 3s (exposure times). However if it is on the timing box on a storyboard such as 18k or 2+5k, it simply means frame counts for timing purposes.

３K 中２/２K 中３

- This kind of annotation is used if you are doing like a walk cycle and one of them is shorter than the other, 3K or 2K simply means the exposure times followed by the numbers of frames. Let’s say… “3K 中 8”, it simply translates as there are 8 frames on 3s or 3frames within 8, roughly speaking. This becomes useful when you need to emphasize that two different animation loop/cycles differ where one is faster than the other, how would you be able to say that without confusion? You simply write:
    - **3k 中 6, 3k 中 5:** One is faster than the other by 1 frame with the same amount of exposure times.

HARMONY/ハ―モニ―

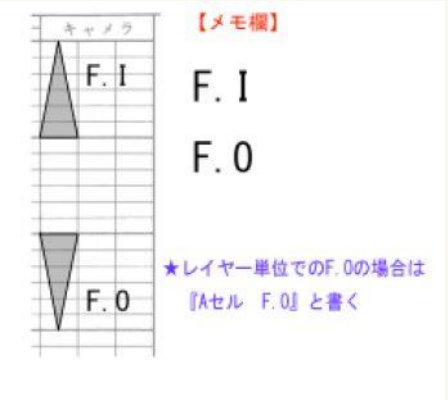
- This is often used to emphasize dramatic effects, it is just a super rendered/detailed painting of the animation frame, you can just google it to see what it is.

中割/中割り/中わり/NakaWari

- This doesn’t show on storyboards but it simply means in-between or “middle part” and it’s useful if you want to give specific directions for in-betweening.

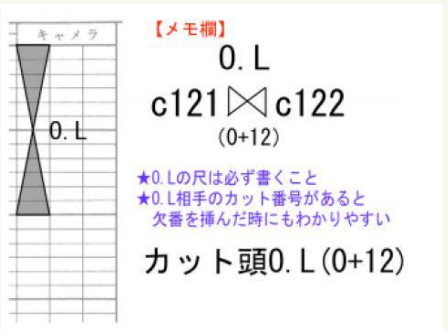
ACT/AC

- It means Action cut or cutting an action, which is when an action is about to occur, a cut from one shot to another view that matches the first shot's action, creating a visual bridge between two cuts (creating continuity).



F.I.-F.O, WXP, BL, OL

- Fade-in/Fade-out: camera effect that allows the shot to slowly fade out or fade in similar to the change in opacity of a given image. It can also be used to slowly fade into the next cut as a transition, for example, but you can also mix it with other camera effects that brightens it or darkens it.
- **WXP** = Opacity followed by a percentage number (WXP 50%)
- **BL**= Black frame
- **OL**= Overlay is also known as a Crossfade, which fades out the original while the secondary image fades in.



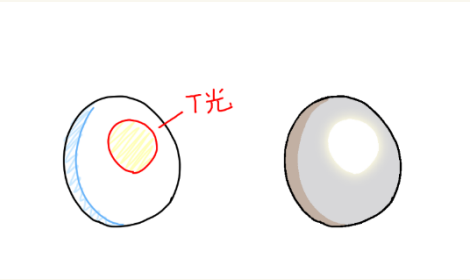
ショックコマ/Shocking Koma

- Also known as IMPACT FRAMES in the West.
- On the x-sheet, if you need to emphasize an impact frame being black/white, you can simply write it as 白コマ(white frame) or 黒コマ (black frame) as shown here. Make sure that if you do include those in the camera column, specify which **layer** you want it to have it on (if applicable) such as [A セル] or [B セル] translated as layer A/B.

T 光(T-Light)

- T-Light is a glow effect, if you want it stronger add SUPER T 光.

  As a KA you can control those minor effect as mentioned before.



MISCELLANEOUS

-fix フィックス..... To hold (It's the same as FIX in Anime)
-pan パン .....Hold your position of the camera and only move the neck left and right (Same as PAN in Anime)
-follow pan フォローパン.....Hold your position of the camera and only move the neck left and right to follow the subject. (Same as tsuke PAN, Follow PAN)
-tilt up/down ティルトアップ/ダウン ...Hold your position of the camera and move the neck up and down. (same as PAN up and PAN down in Anime)
-crane up/down クレーンアップ/ダウン....Vertical movement of camera(same as PAN up and PAN down in Anime)
-Dolly, Track ドリー・トラック.....Lateral movement of camera (same as PAN, Follow in Anime)
-Follow Track フォロートラック .....Follow the subject with a lateral movement of the camera (same as Follow PAN/ Tsuke PAN. Same as FOLLOW if it's in constant speed)
-zoom in/out ズームイン/アウト .....Hold your position of the camera, shift the lens by changing the focal length of the lens(same as T.U/T.B in anime)
-Dolly in/out ドリーイン/アウト .....Front/back movement of camera(same as Multi plane T.U/T.B in anime)
-PAN focus パンフォーカス・Deep Focus ディープフォーカス..... To put everything in focus by putting the depth of field deep.

Payment Form (in-house animators only)

This is something that you will have to fill at some point and each studio will provide you a copy such as the one below. The form is in kanji but I have one translated here so try your best to memorize the kanji version so you can compare with your own form (do NOT send this excel sheet)

https://drive.google.com/open?id=1I0GCU7JjxDeUVGHZEjLXMtP9weQ3CmFd
https://drive.google.com/open?id=1wVaL-F4nwSTBibiuqG16m82-7KyP7fjQ

The detail that you need to pay attention the most is the bank section and the special notes under the excel sheet. In Japan, each worker has a “my number” card, it is a personal ID card unique to each person and you can only get one if you have residency or permanent job. If you are freelancer, living outside of Japan, you do not need to worry about this, they should have online transaction such as paypal, but it’s good to know about this beforehand in which case some studio might not have access to online transaction (Japanese banking is really outdated and complex trust me) so make sure you tell your studio that you do not possess a “my number” card and to specify that you do not live in Japan, if you are at an in-house studio in Japan.

Resources (downloadable timesheet/layout/storyboard templates by Anime industry standards)

- Cinematic Storyboard templates (only for films): https://drive.google.com/open?id=0B7JIEvne-UZuOGMxLTNVOEgxVW8
- HDTV Storyboards + HDTV Layouts: https://drive.google.com/open?id=0B7JIEvne-UZuUkk1WVBqcC05bEE
- Timesheets (144 frames/6 seconds per page):

  https://drive.google.com/open?id=0B7JIEvne-UZub2I3ejd1VWNvYVE

- References (genga collection, storyboards, etc.) good for studying everything mentioned above.

  https://drive.google.com/open?id=1GdwNSnoJJLzgjH9ye8UIonsWmVLEcfBS

Sources:

https://twitter.com/gem_ch18

https://twitter.com/RonDeseo

https://drive.google.com/open?id=1efpPIelKSGETworiQ0UAYhm2SLYrS5ys\

http://www.mars.dti.ne.jp/~yato/eva/cont.htm

http://www.inouejet.com/camera

http://listeningside.net

http://animator276.com

https://www18.atwiki.jp/sakuga/pages/28.html